REMARKS/ARGUMENTS

Claims 1-16 are pending. Claims 1-16 stand rejected in the Office Action mailed October 23, 2003.

Claims 1-16 are rejected under 35 U.S.C. §103(a) as being unpatentable over Mattson et al. (U.S. Patent 5,717,893) (hereafter, "Mattson") in view of the alleged knowledge in the art.

Claims 1, 7, and 11 have been amended. It is respectfully submitted that no new matter has been added.

CLAIM REJECTIONS

REJECTIONS UNDER 35 U.S.C. §103(A)

The Examiner rejected claims 1-16 under 35 U.S.C. §103(a) as being unpatentable over Mattson and alleged knowledge in the art. Applicants submit that claims 1-16 are not anticipated by Mattson. In regard to the rejection of claims 1 and 7, and 11 the Examiner has stated in part that:

> Mattson teaches the invention as claimed including an apparatus and method for dynamically partitioning a cache array based upon requests for memory from an integrated device having a plurality of processors...
> (3/12/04, Office Action, pp. 2-3)

Applicants respectfully submit that claim 1 is not made obvious by Mattson and the alleged knowledge. Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. *In re Fine*, 837 F.2d 1071 (Fed. Cir. 1988).

Neither the cited reference, nor the alleged knowledge in the art teach (nor does the Office Action cite any portion which even suggests) the presently claimed feature of ***dynamically partitioning*** *an N-way set associative cache array* ***in a sharing mode at a first time***...*and*

dynamically un-partitioning *the N-way set associative cache array* ***not in a sharing mode at a second time.*** (Emphasis added) Mattson does not disclose this feature as can be seen by the following analysis of Mattson. Mattson discloses a method for managing a cache hierarchy. (Mattson, title) The way that Mattson manages a cache is that when an application requests a block of data, B, the cache manager must find B, tag B with a DataType, Tb, make room for it in partition P0 of the cache, and make it the Most Recently Used block in P0. (Mattson, col. 8, ll. 17-21). It is apparent that through this mechanism in Mattson, the cache manager is instructed to change the partition sizes at predetermined times in an attempt to maximize the number of hits to a cache. (Mattson, col. 9, lines 60-62) (Emphasis added). Nor does Mattson describe a cache array having a sharing mode anywhere.

Mattson further describes the dynamic categorization of blocks of data into disjoint DataTypes. (Mattson, col. 10, ll. 5-20). However, with Mattson the number of partitions is not changeable, with the size of each partition being changed. (Mattson, col. 10, ll. 5-16) Thus, Mattson discloses a method of organizing data hierarchically in a cache array at *predetermined* times. However, because Mattson does not disclose of ***dynamically partitioning*** *an N-way set associative cache array* ***in a sharing mode at a first time...and dynamically un-partitioning*** *the N-way set associative cache array* ***in a sharing mode at a second time.*** as taught by claim 1, applicants respectfully submit that claim 1 is patentable under 35 U.S.C. §103(a) over Mattson and the alleged knowledge in the art. Furthermore, because neither Mattson nor the alleged knowledge disclose this feature as taught by applicants and given that claims 2-6 depend directly or indirectly from claim 1, applicants respectfully submit that claims 1-6 are patentable under 35 U.S.C. §103(a) over Mattson and the alleged knowledge in the art.

The Examiner also rejected independent claim 7 under 35 U.S.C. §103(a) for the reason set forth in the rejection of claim 1. Claim 7 discloses substantially similar limitations as claim 1, and recites ***an N-way set associative cache memory array dynamically partitioned at a first time.*** *wherein the N-way set associative cache array is* ***configured to be dynamically un-partitioned at***

a second time.... (Emphasis added) Furthermore, because neither Mattson nor the alleged knowledge disclose this feature as taught by applicants it is respectfully submitted that claim 7 and dependent claims 8-10 are patentable under 35 U.S.C. §103(a) over Mattson and the alleged knowledge in the art.

The Examiner also rejected independent claim 11 under 35 U.S.C. §103(a) for the reason set forth in the rejection of claim 1. Claim 11 discloses substantially similar limitations as claim 1, and recites ***dynamically partitioning*** *an N-way set associative cache array* ***at a first time***...*and* ***dynamically un-partitioning*** *the N-way set associative cache array* ***at a second time.*** (Emphasis added) Furthermore, because neither Mattson nor the alleged knowledge disclose this feature as taught by applicants, it is respectfully submitted that claim 11 and dependent claims 12-16 are patentable under 35 U.S.C. §103(a) over Mattson and the alleged knowledge in the art.

CONCLUSION

In view of the foregoing, it is believed that all claims now pending (1) are in proper form, (2) are neither obvious nor anticipated by the relied upon art of record, and (3) are in condition for allowance. A Notice of Allowance is earnestly solicited at the earliest possible date. If the Examiner believes that a telephone conference would be useful in moving the application forward to allowance, the Examiner is encouraged to contact the undersigned at (408) 947-8200.

Respectfully submitted,

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